

### Quiz 1

1. Find the domain of

$$\frac{3x+5}{2x^3+x^2-5x+2}$$

given that  $x - 1$  is a factor of the denominator.

2. Perform the subtraction

$$\frac{2}{2x-3y} - \frac{3x^2-y}{8x^3-27y^3}$$

Your answer will be a single rational expression.

3. Simplify

$$\left(\frac{x^{-3}+y^{-2}}{3x^{-3}y^2}\right)^2$$

Your answer should be a single rational expression (which means no negative exponents).

4. Simplify

$$\sqrt{27x^6} \div \sqrt[3]{x^8}$$

Your answer should be a single radical expression.